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Guideline C-12-1

**An Outline of the Essential Components of Training Programs for Drivers of Liquid
Industrial and Hazardous Waste Transportation Vehicles**

Legislative Authority:

*Environmental Protection Act, RSO 1990, Section 27 Ontario Regulation 347,
Sections 16(7) and 16(9)*

Responsible Director:

Director, Central Region

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1.0 Introduction

Regulation 347 has been designed to ensure that liquid industrial and hazardous wastes are effectively managed from generator to carrier to receiver. To provide this necessary control the regulation includes detailed definitions for liquid industrial and hazardous wastes and an effective waste manifest system. In addition, the regulation establishes specific responsibility for each of the three parties involved in any waste transaction. Guideline C-12 and this procedure deal with one of the major responsibilities for carriers: driver training.

Regulation 347 requires that drivers of vehicles used for the transportation of liquid industrial or hazardous wastes must be trained in the following five areas:

- i) the operation of the vehicle and waste management equipment,
- ii) relevant waste management legislation, regulations and guidelines,
- iii) major environmental concerns for the waste to be handled,
- iv) occupational health and safety concerns for the waste to be handled, and
- v) emergency management procedures.

The responsibility for providing driver training rests with operators of companies involved in the transportation of either liquid industrial or hazardous wastes. The guideline and procedure have been prepared to assist these operators (carriers) in the design and assessment of training programs given to their drivers. It can also be used as a syllabus either by carriers or by specialized training organizations involved in the design and offering of effective training programs.

For most hazardous wastes, the guideline is not intended to require carriers to provide a training program in addition to the program specified under the federal *Transportation of Dangerous Goods Act* (TDGA) or the provincial *Dangerous Goods Transportation Act*. The two transport and environment training programs can be integrated into one program. Although training under *TDGA* is for the most part, sufficient to ensure compliance with Regulation 309, training is required in the following additional areas to ensure full compliance:

- relevant waste management legislation, policies and guidelines,
- major environmental concerns for the wastes to be handled.

For liquid industrial wastes and for those hazardous wastes not covered by the *Transportation of Dangerous Goods Act* such as Leachate Toxic and Severely Toxic Wastes, training programs should follow this guideline.

Because of the varied nature of the waste management industry, programs will have to be tailored to meet the needs of individual companies. In some cases, it may be necessary for carriers to train beyond the areas identified by the guideline where there exists an important environmental or occupational health concern.

2.0 COMPLIANCE

Operators of companies transporting liquid industrial and hazardous wastes must obtain a waste management system Certificate of Approval for their complete operations under Section 27 of the *Environmental Protection Act*. These Certificates of Approval specify the classes of waste that can be handled by the company and any other

conditions of operation.

2.1 Information to be Supplied Concerning Driver Training

When applying for either a new or a revised waste management system Certificate of Approval, for the transportation of liquid industrial wastes, the operator must provide written confirmation that he/she has an acceptable driver training program in place which addresses the five items contained identified in Section 16 (1)(9) of O.Regulation 347.

At the same time, the operator may be required to also provide the Ministry with a list confirming the names of trained drivers in his/her employ at the time of application.

2.2 Conditions Applied to Certificate of Approval with Respect to Driver Training

Conditions respecting driver training are typically incorporated in the Certificate of Approval, a copy of which must be kept in the vehicle at all times. Examples of the type of conditions that may be included in a Certificate relating to driver training are provided in the below table:

Example No.	Example Condition
i.	Every driver must carry a copy of his/her Certificate of Training at all times when operating or in any way tending a waste transportation vehicle.
ii.	An individual who has not successfully completed a driver training program is prohibited from operating or in any way tending a waste transportation vehicle except as part of an approved training program, in the course of which he/she must be under the direct supervision of a trained driver at all times.
iii.	A waste management system operator must maintain, at the operator's place of business, a list of the trained drivers in his/her employ, and must make such list available for Ministry inspection upon request.

3.0 REQUIRED AREAS OF TRAINING

This section deals with the driver training requirements specified in Regulation 347.

The following tables provide additional detail of the information identified in Section 16 (1)(9) of Regulation 347 that a driver must be able to demonstrate complete familiarity upon completion of the drivers training program:

Table 1: The Operation of the Vehicle and Waste Management Equipment

Task No.	Task
a.	The operation of all waste management vehicles that the driver is likely to operate and/or all prevailing models commonly in use by the carrier.

b.	The location, function and operation of all controls for waste management equipment (pumps, valves, gauges, etc.) and any of their emergency features.
c.	The proper loading and unloading procedures for the common types of wastes handled by the carrier (acids, solvents, used oils, sludges, etc.) in both drum and bulk shipments.
d.	The following manufacturer's specifications for the vehicle: <ul style="list-style-type: none"> - maximum capacity; - dimensions; and - material of construction.

Table 2: Relevant Legislation

Task No.	Task
a.	A general understanding of the following provisions in the <i>Environmental Protection Act</i> : -the approvals requirements, -penalties for improper management.
b.	An understanding of the following Regulation 347 requirements important to drivers: <ul style="list-style-type: none"> - locking requirements for valves when the driver is not in attendance; - responsibility of driver to be in attendance during loading or unloading, unless an operator from the generator's or receiver's site is present; - documentation requirements (Certificates of Approval and manifests);-requirements for the manifest to be complete with no obvious errors at the time of a waste transfer;- registration requirements for waste generators;-all safety mark/placarding requirements under TDGA; - requirement for vehicles to be leak-proof and covered where necessary to prevent odours or other emissions from the vehicle.
c.	An awareness of other applicable legislation for the wastes handled by the carrier such as Ontario Regulation 362 (Waste Management - PCBs), Part X of the <i>Environmental Protection Act</i> (Spills), the <i>Dangerous Goods Transportation Act (Ontario)</i> , the <i>Transportation of Dangerous Goods Act (Canada)</i> (and regulations there under) and the <i>Occupational Health and Safety Act</i> .

Table 3 – Major Environmental Concerns

Task No.	Task
a.	A knowledge of the characteristics of waste dangerous goods as defined under the <i>Transportation of Dangerous Goods Act</i> (corrosive, flammable, infectious, etc.).
b.	A knowledge of the characteristics of liquid industrial, leachate toxic and severely toxic wastes as defined under Ontario Regulation 347.

c.	A knowledge of the physical properties of subject wastes to be handled by the driver which affect its hazard and disposal options (liquid, solid, slurry, or gas.
d.	A knowledge of the potential effects on the environment of subject wastes to be handled by the driver.
e.	A knowledge of compatibilities of subject wastes to be handled by the driver. The information for specific wastes required under subsections(d) and (e) above can be supplied to drivers at the time of each waste transfer.

Table 4 – Occupational Health and Safety Concerns

Task No.	Task
a.	Responsibilities of all parties as prescribed under the <i>Occupational Health and Safety Act</i> .
b.	Relationship between a waste's characteristic (corrosivity, toxicity, etc.) and the nature and degree of injury that could result from inhalation, ingestion and skin contact as well as any emergency action required.
c.	Protective measures and equipment to be used to prevent inhalation, ingestion and skin contact with wastes of different characteristics.
d.	The function, location, and use of safety equipment carried in the unit, including the fire extinguisher, protective clothing and respiratory equipment.

The information for specific wastes required under subsections (b) and (c) above can be supplied to drivers at the time of each waste transfer.

Table 5 – Emergency Management Procedures

Task No.	Task
a.	Procedures for handling wastes during emergencies and location of any emergency features on operating equipment.
b.	Initial response required from the driver in the event of an accident involving various types of wastes.
c.	Emergency call requirements (under Section 92 of the <i>Environmental Protection Act</i>) in the event of a spill.

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d.	Need to comply with the entire notification requirements in the Transportation of Dangerous Goods Regulation.
e.	In particular, drivers should be aware of the location and function of vehicle emergency equipment (fire extinguishers, red flags, flares, electric lanterns, fuses, first aid kit, rubber gloves, goggles, rubber boots, self-contained breathing apparatus, etc).